

CLAIMS

What is claimed is:

1. A pharmaceutical formulation for topically administering a skin-lightening agent, the formulation comprising a skin-lightening agent in which said skin lightening agent is a 4-substituted resorcinol which is in admixture with a pharmaceutically acceptable carrier, the carrier comprising a co-solvent and at least one hydroxyl compound selected from the group consisting of glycols, lower alkanols and water.
2. The formulation according to claim 2 in which said 4-substituted resorcinol is selected from the group consisting of 4-cyclohexyl resorcinol and 4-cyclopentyl resorcinol.
3. The formulation according to claim 3 in which said carrier is comprised of a glycol and a lower alkanol.
4. The formulation according to claim 4 in which glycol is selected from the group consisting of methylene glycol, ethylene glycol, propylene glycol, butylene glycol, polyethylene glycol, and hexylene glycol.
5. The formulation according to claim 4 in which said lower alkanol is selected from the group consisting of methanol, ethanol, propanol, isopropanol, butanol, isobutanol, and tert-butanol.
6. The formulation according to claim 4 in which said co-solvent is a dianhydrohexitol analog or derivative thereof
7. The formulation according to claim 2 in which said carrier is comprised of: 1) from about 25 to about 95 % (vol/vol) of a hydroxyl compound selected from the group consisting of glycol, and a lower alkanol; and 2) about 5 to about 50% (vol/vol) of a co-solvent which is a dianhydrohexitol analog or derivative thereof
8. The formulation according to claim 8 in which said carrier is an admixture of hexylene glycol, propylene glycol, ethanol, and dimethyl isorbide.
9. A pharmaceutical formulation for topically administering a skin-lightening agent in which:
 - 30 a) the skin lightening agent is 4-cyclopentyl resorcinol which is in admixture with a carrier,

5 b) said carrier is comprised of

- a. about 15 % (vol/vol) of dimethyl isorbide,
- b. about 5% (vol/vol) of hexylene glycol,
- c. about 40% (vol/vol) of propylene glycol and,
- d. about 35% (vol/vol) of ethanol.

10 10. Use of a formulation according to anyone of claims 1-9 or 10 in the manufacture of a medicament for lightening skin.